

## **Abstract**

A dual input DC-DC power converter integrating high/low voltages can simultaneously or individually transfer the power from two input power sources respectively having voltages higher than and lower than an output voltage to a load end. If one power source is failed, the other power source can still transfer power normally. Moreover, if an appropriate control circuit is matched, the currents and powers of the two input DC power sources can be accurately controlled to accomplish tracking operations of the maximum power of each power source. The power conversion system can be exactly simplified to accomplish the effects of enhanced efficiency and lowered cost and also have the advantage of simultaneous transmission of power from two voltage sources to the load end.